

Serial No.: 10/734,022  
Filed: December 11, 2003

### Remarks

The Examiner has also rejected Claims 1, 8-25 under 35 USC 103(a) as being unpatentable over Nishiyama (US 2004/0063827) in view of Lee et al (US7,022,458).

The present invention relates to a photoresist composition comprising a polymer comprising at least one unit derived from a cyclo olefin monomer and at least one unit of structure 1. The cyclo olefin monomer is a cyclic structure containing an olefin bond used to polymerize with other unsaturated bonds, as described in the specification on page 9-10.

Lee teaches a polymer comprising cyclic olefin monomer groups, and acrylate monomer groups.

Nishiyama teaches the use of the monomer Ia-25 in an only acrylate based polymeric system suitable for ArF photofabrication [0013], i.e. there are no alicyclic groups in the backbone of the polymer. Importantly, Nishiyama teaches away from the use of alicyclic hydrocarbon moieties, as disclosed in paragraph [0006];

"In the case of photoresist compositions designed for use of an ArF light source, there is a proposal to introduce alicyclic hydrocarbon moieties into resins for the purpose of providing dry etch resistance. However, the introduction of alicyclic hydrocarbon moieties renders the resin extremely hydrophobic, thereby yielding such a detriment that the photoresist is difficult to develop with an aqueous alkaline solution of tetramethylammonium hydroxide."

Serial No.: 10/734,022  
Filed: December 11, 2003

It is as a result of the perceived undesirability of the alicyclic group that Nishiyama teaches the totally acrylate based system. Nishiyama does not suggest or exemplify the use of an alicyclic moiety in the backbone of the polymer.

Since Nishiyama teaches away from the use of alicyclic groups in the polymer, one of ordinary skill in the art would not look to combine Lee's teaching for equivalent functionality. Lee teaches only a polymer comprising an alicyclic moiety in the backbone.

Thus the applicants submit to the Examiner that Nishiyama and Lee cannot be combined, and therefore the present invention is not prima facie obvious to one of ordinary skill in the art of photoresist.

In view of the above remarks, the present application is believed to be in condition for allowance, and reconsideration of it is requested. If the Examiner disagrees, she is requested to contact the agent for Applicants at the telephone number provided below.

Respectfully submitted,



Sangya Jain  
Reg. No. 38,504  
AZ Electronic Materials USA Corp.  
70 Meister Avenue  
Somerville, NJ 08876  
Telephone: (908) 429-3536  
Fax: (908) 429-3650

Customer No. 26,289